western shore, for at least 6 or 7 miles, might be one vast forest of cocoa-nut trees. The small plantations of fifty or sixty near the dwellings present a very healthy appearance, and are in full bearing.

"Otherwise the population of the place, amounting to about 500 I should suppose, support themselves by trading, sailing, collecting sponges, and going abroad as labourers for steamers in the West Indian trade. Some salt is made from an extensive salt-pond that stretches for 4 to 5 miles just inside the north-western shore. Another smaller pond is found on the south-eastern shore.

"The town is a decent little village, with a good church, school, post-office, jail, and very creditable dwellings. The people are very well behaved and decent on the whole. Among cultivated plants around dwellings I can mention *Poinciana regia*, *Casuarina equisetifolia*, *Terminalia Catappa*.

"It is very gratifying to see the spirit of neatness and order that pervades everything in the English islands, and which forms such a contrast to the squalor and utter wretchedness that marks much richer islands, like Hayti, Porto Rico, and Cuba. As the coloured population is of the same race in all these places, it can only be ascribed to the example set by the governing race in this case.

"As you may imagine, the vegetation of this, as of most of these islands, possesses a strong uniformity and sameness, as there are no elevations of any extent to produce variety, and partakes in fact of the character of the vegetation of the sea-shore. I therefore can hardly expect to add much to my collections in this place now, and therefore intend to pass to Crooked or Acklins Island as soon as an opportunity offers.

"In a certain sense, of course, locomotion is easy enough from one island to another, yet you must always wait for an opportunity if you do not want to hire a vessel or a boat for your own use.

"After I have finished this group I propose to go to Nassau, and from there to pass over to Andros, which, from what I have been able to gather, is somewhat different from the other islands, especially on account of its being full of swamps and fresh-water lakes, which ought to give the vegetation a somewhat different character. Andros, too, is heavily wooded, both with pine forests as also with other trees, of which many are cut and exported for timber.

"As the season advances I also expect to find a greater proportion of plants in blossom than at present, so as to make my collections from these islands as complete as possible. Still a number of trees will most likely be represented by their leaves only or at best in fruit, which of course cannot be avoided, unless the exploration were continued through the year, and this, as you may imagine, cannot be done for the amount at my disposal, of which necessarily a part has already been consumed by the voyage hither.

"From what I have collected already, I think, however, I am able to say that I shall get together a considerable herbarium, which I hope will contain no few novelties, and give a fair representation of the flora of this archipelago. I need hardly add that I make copious general notes on the vegetation, as well as on the natural history and physical conditions of the islands in general.

"Yours very faithfully,
"EGGERS."

NOTES.

WE understand that, in accordance with the arrangement made on March 24, an important deputation, consisting of Sir Henry Roscoe, Sir Lyon Playfair, Sir John Lubbock, and Mr. Howorth, met Mr. Stanhope and Lord Harris on Monday last, to discuss the regulations for the selection of Woolwich cadets, so far as they relate to natural science. We believe that the proposals submitted by the deputation will receive favourable consideration.

THE late Mr. Thos B. Curling, F.R.S., has bequeathed £200 free of legacy duty to the Scientific Relief Fund of the Royal Society.

A FRESH case of specimens from the borings in the Delta of the Nile has just been received at the Royal Society.

PROF. HOFMANN, the chemist, celebrated his seventieth birthday on Monday. The Emperor Frederick sent him a patent of nobility, and among many other birthday gifts were portraits of Queen Victoria and the German Empress. From the Prince Regent of Bavaria Prof. Hofmann received a high decoration.

DR. EMIL HOLUB, the African traveller, intends to open a South African Exhibition in the old Exhibition building known as the Rotunde, in Vienna, in May 1889. The industries, exports, and dwellings of the natives will be exhibited, as well as the collections made by Dr. Holub.

A YEARLY pension of 800 roubles has been granted by the Russian Government to M. Potanin in recognition of his work as an explorer in China and Mongolia.

THE question as to the best means of promoting technical education is being earnestly discussed in Russia. A Congress, summoned by the Permanent Committee for Technical Education, is about to meet at St. Petersburg for the consideration of the subject. The sum of £500 has been granted by the Government for the expenses of the Congress.

A RUSSIAN zoological station has been established at Villafranca, a few miles from Nice. The Bay of Villafranca is well known for the work that has been done there by some of the most prominent Continental biologists, and it certainly offers great advantages for the study of marine fauna. An old Italian prison, which was formerly sold to the Russian Government, and used as a kind of naval station for repairs of ships of the Russian Navy, has now been transformed into a zoological station, supported by the Russian Naval Ministry. It has two spacious and well-lighted halls for microscopical work, five smaller rooms, and accommodation for men of science who may wish to carry on biological investigations. It is under the direction of Dr. Korotneff.

WE regret to learn that Captain Temple has been compelled to discontinue the issue of his most interesting and valuable periodical, *Indian Notes and Queries*. His duties at Mandalay, where he is playing an important part in the work of reorganization in Upper Burmah, so occupies his time that he is quite unable to put together periodically the notes sent to him by many contributors. His other periodical, the *Indian Antiquary*, is to be maintained, and contributions to the now defunct serial will be diverted to it.

A DEPUTATION from the "Australian Natives' Association" waited recently on the Minister of Education of Victoria to urge that an Australian series of school-books should be published, so that fuller information on purely Australian subjects should be made available to the children in State schools. It was argued that there was virtually no special information about Australian geography in the books used. The Minister was asked to bear in mind that 650,000 of the total population of Victoria were native born, and that the vast majority were growing up in ignorance of the geography of their native land. Australian literature, like Australian geography, was neglected by the Education Department. The deputation laid particular stress on the argument that the Government would stimulate the Federal sentiment by giving Australian subjects prominence in the State schools.

The death is announced at Yokohama, on February 17, of Mr. Henry Pryer, an old resident there, who had devoted much attention to the study of Japanese entomology and ornithology. The writer of an obituary notice in the *Japan Weekly Mail* states that, except for a short time, when engaged in arranging natural history collections in the Tokio Museum, Mr. Pryer was occupied in business pursuits, his spare time being given to the study of Japanese fauna; "and it is no exaggeration to state that he had become the authority *facile princeps* on all questions connected with the birds, butterflies, and moths, whilst at the same time he had acquired a most extensive knowledge and store of facts in connection with all the other branches of the zoology of Japan." Mr. Pryer was the author of papers in various English scientific journals, and the Transactions of the Asiatic Society of Japan. In November 1886 he published Part I. of a description of the butterflies of Japan, under the title "Rhopalocera Nihonica," and Part II. is said to be in the printers' hands, and almost ready for publication. It is to be hoped that the third and concluding part may be found in such a state of preparation as will insure the completion of the work. Mr. Pryer, who was the brother of Mr. Pryer of the North Borneo Company's service, like himself an enthusiastic student of Nature, was only thirty-nine years of age at the time of his death.

Russian zoology has sustained a heavy loss by the death of Prof. M. N. Bogdanoff. He died at St. Petersburg on March 16. His first work, published in 1867, was on the life and the geographical distribution of the *Tetrao urogallus*. Four years later he published a most elaborate and suggestive work, "The Mammals and Birds of the Black-earth Region of the Volga," in which he treated in detail the present geographical distribution of animals in connection with the climate and soil of Russia during the Post-Pliocene period. In 1873 he took part in the expedition to Khiva, and returned with a rich geological collection, now at the St. Petersburg University. The results of this journey were embodied in a capital work on the Khiva Oasis and the Sands of Kyzyl-kum. His next work was on the fauna of the Aral-Caspian basin, which he described in the *Mémoires* of the Society of Naturalists at the St. Petersburg University. In 1875 he began the exploration of the Caucasus, and published the results of his labours in a work, "The Birds of the Caucasus," which has become the foundation-stone of the ornithology of the region. In 1880 he visited a part of the coast of the Arctic Ocean, and the results of his journey were published in the *Mémoires* of the Society at St. Petersburg University. In 1881 he published another excellent work, "The Russian Magpies." Finally, in 1885, he began the publication of his life-work, "The Ornithology of Russia," of which only the first part has been issued. Prof. M. N. Bogdanoff's popular zoological sketches, published in a Russian review, were widely read. All the above-mentioned works, as also many smaller monographs, have been published in Russian.

The Russian Geographical Society has lost one of its most active ethnographers, V. N. Mainoff, whose works on the Erzya-Mordvinians—their anthropological features and customs—are well known. His knowledge of the Finnish language gave a special value to his works on the remnants of paganism among the Mordvinians, and to his descriptive work on Karelia and the Onega region. He had already published a Finnish grammar in Russian, and was engaged in the compilation of a Finnish and Russian dictionary. The latter task was intrusted to him by the Senate of Finland. He had brought the dictionary up to the letter K.

Another masterly contribution to the fundamental principles of chemistry, leading us still further into the intensely interesting region of the hitherto unknown, will be found in the current number of the *Berichte*, from Profs. Victor Meyer and Riecke. We have from time to time in these columns noticed the progress of the development of the now famous "position-in-space" theory first formulated by Van t' Hoff, and it will perhaps be remembered that a short account was recently given of the remarkable results obtained by Prof. Meyer from the study of certain complex organic compounds. The main result consisted in the discovery of two new properties possessed by carbon atoms: first, that the four valencies may be deviated from their positions at the corners of a regular tetrahedron; and second, that two carbon atoms united by single bonds may be attached to each other in two ways—one in which they are free to rotate, and another in which rotation is prevented. Recognizing that the chemist must not tread this unbroken ground alone, but that he must go hand in hand with his co-worker the physicist, Profs. Meyer and Riecke have brought together evidence afforded by both physics and chemistry, and have thereupon formulated a theory which appears likely to be the germ of a grand generalization. They suppose the carbon atom to be a sphere surrounded by an ether shell, that the atom itself is the carrier of the specific affinity, while the surface of the ethereal envelope is the seat of the valencies. Each valency is conditioned by the existence of two oppositely electrified poles, situate at the ends of an imaginary straight line, short in comparison with the diameter of the envelope. Such a system of two poles is termed a di-pole. The four valencies of the carbon atom would thus consist of four such di-poles. The middle point of the line joining each pair of poles is further supposed to remain always in the surface of the envelope, but freely movable in that surface, and the di-pole itself would be able to rotate freely round this central point. It is then supposed that the carbon atom possesses a greater attraction for the positive than for the negative ends of the di-poles, so that, owing to the possibility of free rotation, the positive ends would turn towards the centre of the atom. At the same time the valencies of the same atom would repel each other, and take up their positions at the four corners of the regular tetrahedron, from which, however, they could be, as experiment shows they occasionally are, deflected. Thus the molecules of marsh gas, CH_4, or any carbon compound of the type Cx_4, would naturally be symmetrical, but when the four valencies are attached to groups of different weights their positions would probably be altered. A strikingly natural explanation is then given of the nature of single, double, and triple linking of carbon atoms, showing how the first can occur in the two ways previously indicated. It is a matter for sincere congratulation to those who have been labouring so long in building up the now immense fabric of organic chemistry, that it is by reason of the large accumulation of data concerning the carbon compounds that these important principles have been arrived at; and it is to be hoped that before long the data may be sufficient to permit of like investigations of the atoms of other elements.

So many interesting reports relative to waterspouts, sighted during January and February in the western portion of the North Atlantic, have been received by the Hydrographer of the United States Navy, that he has plotted them in a supplement to the Pilot Chart of the North Atlantic Ocean for March, together with the tracks of storms coincident with some of them. The positions of the spouts are given for fourteen days between January 12 and February 29. To specify a few cases:—On January 12 four spouts were seen in lat. 36° 41′ N., and long. 72° 27′ W., and on the 19th several were seen a little farther to the eastward. And again, on January 22, several large spouts were seen in lat. 31° 47′ N., long. 74° 33′ W. The most interesting of all are those seen on January 26–28, for the reason that they were clearly associated with a low barometer area which moved across the great lakes on the 25th. One of these, seen on January 28, in lat. 39° 30′ N., long. 57° 20′ W., is estimated to have been a mile in diameter. On February 11 the ship *Reindeer* was completely dismasted by a spout in lat. 32° 4′ N., long. 76° 6′ W. The weather was clear at the time, and the whole affair was over in a few minutes. Generally speaking, the rotation was, as in the case of tornadoes, in the opposite direction to that of the hands of a watch, but, in some cases, in the same direction. It is suggested that if instantaneous photographs were taken of some of these remarkable phenomena they would be of great value to the science of meteorology.

AT the meeting of the French Meteorological Society, on March 6, M. Renou stated that the observations at Parc St. Maur showed that the month of February last was colder than it had been since 1855. The temperature of 5° F., observed on February 2, was the lowest on record in that month. On March 1 the minimum, 16°·2, was the lowest recorded in March since 1847. The Society is encouraging the registration of regular observations at the seminary at Port-au-Prince (Hayti). The thermometers, which are now better exposed, show that the temperatures are lower than formerly reported. Very few observations from this district have been published, so that a regular bulletin such as is hinted at by M. Renou would be very welcome. M. Hauvel read a communication on the "Tides of the Sun's Photosphere," due to planetary action. In classifying the planets according to their influence on the photosphere, he places Mercury first and Jupiter second, and he argues that at certain positions Mercury causes storms in the photosphere, giving rise to abnormal variations of temperature in our atmosphere, according to the relative position of the earth.

THE German Meteorological Office has published the results of its meteorological observations for the year 1886 (Berlin, 1888, lvi. + 223 pp.). The stations of the second and third orders now number 256, several new ones having been recently established. A regular system of thunderstorm observations has been commenced, and much attention is paid to rainfall; it is proposed eventually to increase these stations to 2000. In addition to the usual data, the maximum falls in twenty-four hours are given for all stations. The system includes several mountain stations, the highest being the Schneekoppe (nearly 5250 feet). The difficulties experienced in mountain meteorology may be judged of from the fact that in the winter the anemometer on the Schneekoppe has to be abandoned, owing to the accumulation of snow, and in the summer the earth thermometer has to be removed, owing to repeated interference by tourists. The history and outfit of the stations are given in many instances, and will be continued in subsequent reports.

THE Bureau of Ethnology, Smithsonian Institution, lately issued a full and useful bibliography of the Eskimo language, by Mr. J. Constantine Pilling. Now it has published an equally good bibliography of the Siouan languages, by the same scholar. The material for both of these catalogues has been gathered during personal visits to the more prominent public and private libraries of the United States, Canada, and France, and by correspondence with missionaries, Indian agents, publishers, and printers of Indian books, and owners of Americana.

AN interesting paper on the use of gold and other metals among the ancient inhabitants of Chiriqui, Isthmus of Darien, by Mr. William H. Holmes, has just been issued by the Bureau of Ethnology, Smithsonian Institution. The objects described by Mr. Holmes were obtained from ancient graves, of which no record or trustworthy tradition is preserved. They are all ornaments, no coin, weapon, tool, or utensil having come to Mr. Holmes's notice. The great majority of the objects were formed by casting in moulds. The work exhibits close analogies with that of the mainland of South America, but these analogies are found in material, treatment, and scope of employment rather than in the subject-matter of the conceptions. The sum of the art achievements of these peoples seems to Mr. Holmes to indicate a lower degree of culture than that attained by the Mexicans and the Peruvians, the ceramic art alone "challenging the world in respect to refinement of form and simplicity and delicacy of treatment."

THE Report, for the year 1886–87, of the Colonial Museum and Laboratory of New Zealand has been issued. It is the twenty-second annual report of these institutions. The attendance of visitors at the Museum was very large, being considerably above the average of former years, especially on Sunday afternoons, when the very limited passage-room often caused inconvenient crowding. The total number of additions to the collections during the year was 10,708. Among these additions were eleven photographs of the wonderful stone carvings and inscriptions found on Easter Island. In the Colonial Laboratory 345 analyses were performed during the year. These are classified as follows: coals and oils, 22; rocks and minerals, 117; metals and ores, 43; examinations for gold and silver, 81; waters, 36; miscellaneous, 46. In the report all the results of these analyses which have a general or special interest are rendered in full.

A SERIES of papers, entitled "Studies in Biology for New Zealand Students," is being issued by the Colonial Museum and Geological Survey Department of New Zealand. We have received the third paper of the series. It is by Mr. Alexander Purdie, Science Master at the Wellington Training College, who has chosen as his subject the anatomy of the common mussels (*Mytilus latus*, *edulis*, and *magellanicus*). Mr. Purdie points out that, as a subject for study, the mussel has the advantages of being readily procurable at most points of the New Zealand coast, and also of not being so small as to embarrass the tyro in the art of dissection.

WE have received the Report of the Marlborough College Natural History Society for the year ending Christmas 1887. During the year the numbers of the Society largely increased; its meetings were well supported; and the work of the Sections was in most cases considerable. Among the contents of the volume are interesting papers on Aristotle on birds, by Mr. W. Warde Fowler; the migration of birds, by Mr. A. H. Macpherson; and spiders and their allies, by the Rev. O. Pickard-Cambridge, F.R.S.

THE second number of the *Internationales Archiv für Ethnographie* contains the first instalment of a paper, in German, by J. Büttikofer, on the natives of Liberia. This contribution is accompanied by two finely coloured plates representing implements and weapons. Dr. B. Langkavel has an interesting article on the uses to which horses are put by races at an early stage of development.

A LITTLE controversy is going on in the *Internationales Archiv* about the northern limit of the regions within which the boomerang is used in Australia. Prof. Gerland, of Strasburg, in his map of the races of Oceania, has drawn the line about 15° 30′ S. lat. In the first number of the *Archiv*, Prof. Ratzel expressed his belief that the line ought not to be drawn so far north, and that it really extends only to about 18° 30′. In the second number, Prof. Gerland maintains his position, pointing out that Leichardt found the boomerang near the Macarthur River, while Edward Palmer, one of the highest authorities on all subjects relating to the North Australians, found it to the north of Mitchell River. The tribes of these northern districts have independent names for the weapon, which they use more frequently in the chase than in war.

A BOOK entitled "Mœurs et Monuments des Peuples préhistoriques," by M. de Nadaillac, is about to be published in Paris. The text will be fully illustrated.

THE *Selborne Magazine* will in future be published by Mr. Elliot Stock.

THE new number of *Mind* opens with an article on the conditions of a true philosophy, by Mr. S. H. Hodgson. There are also articles on the nature and functions of a complete symbolic language, by Mr. S. Bryant; on Dr. Martineau and the theory of vocation, by the Rev. H. Rashdale; and on the unity of consciousness, by Mr. A. F. Shand.

WE have received a little pamphlet by Dr. G. Y. Cadogan-Masterman, Medical Officer of Health, Stourport, entitled "Dermepenthesis: Animal Skin-Grafting," in which the author gives several interesting cases of successful grafting of the skin of rabbits on wounds on the human body.

AN International Exhibition of farmyard poultry, rabbits, game raised for reserved shooting, machinery and engines for bird-culture, hunting-dogs, and sporting apparatus allowed by law, will be held in Rome, at the Botanical Garden, from April 25 to May 10. The Exhibition is being organized by a Committee of the Agricultural Society of Rome.

ACCORDING to the *Naturforscher*, Herr von dem Borne-Berneuchen has succeeded in breeding, in his piscicultural establishment, specimens of the fish known in America as the black boss.

THE additions to the Zoological Society's Gardens during the past week include two Striped Hyænas (*Hyæna striata*) from Algeria, presented by Capt. E. B. Pusey, R.N.; an Ortolan Bunting (*Emberiza hortulana*), British, presented by Mr. W. H. St. Quintin; a Moorish Gecko (*Tarentola mauritanica*) from Cannes, South France, presented by Mr. J. C. Warbury; two Poiret's Newts (*Molge poireti*) from Algeria, presented by Mr. G. A. Boulenger; a Greater Sulphur-crested Cockatoo (*Cacatua galerita*) from Australia, deposited; a Central American Agouti (*Dasyprocta isthmica*) from Central America, purchased.

OUR ASTRONOMICAL COLUMN.

THE PARIS CATALOGUE.—The first two volumes of the great work undertaken by Leverrier a third of a century ago,—the re-observation of the stars of Lalande's catalogue,—have recently been published. The first volume contains the first instalment of the catalogue, viz. stars from 0h. to 6h. of R.A. observed during the years 1837 to 1881, whilst the second gives the separate observations. That this great undertaking has advanced so far towards completion is chiefly owing to the energy which has characterized the Paris Observatory under the directorship of Admiral Mouchez, and to the strength it has derived from the School of Practical Astronomy which was for several years connected with it. When Admiral Mouchez succeeded to the direction in 1878, barely one-third of the necessary observations had been secured, and the annual number of observations obtained was only about 6000 or 7000, a total which, however considerable in itself, was very inadequate in view of the 300,000 required to complete the original programme of a minimum of three observations in each element for the 47,390 stars of Lalande's catalogue. The gift by M. Bischoffsheim of the fine Eichens meridian-circle, and the assistance furnished by the pupils of the astronomical school have, however, raised the yearly average to 25,000 or 28,000 observations, and rendered it possible to commence the publication of results. As the observations include not only those made since Leverrier became Director, but also some 20,000 or 30,000 made between 1837 and 1854, under Arago's superintendence, but left unreduced by him, they have been divided into three periods, viz. 1837–53, 1854–67, and 1868–81, and severally reduced to the mean epochs 1845, 1860, or 1875. Observations subsequent to 1881, about one-fourth of the entire number, will be published separately, and a separate supplementary catalogue will also be formed of those stars which it has been found necessary to re-observe owing to the disproportion between the number of observations secured in the two elements, due to the R.A.'s in so many cases having been observed with the transit instrument, whilst the declinations were taken with the mural circle, the transit circles having been erected only in 1863 and 1877 respectively. The present section of the catalogue contains 7245 stars, and represents about 80,000 observations in both elements. It gives for each of the three periods the number of observations, the mean date, the R.A. and N.P.D. reduced to the mean epoch, and a comparison with Lalande. The precessions for 1875 are also added. The introduction, by M. Gaillot, who has superintended the reduction, contains a discussion of the probable errors of the observations, and is followed by a comparison of the present catalogue with Auwers' Bradley, and an important investigation by M. Bossert of the proper motions of a large number of stars, followed by a table of errors in Lalande's catalogue, which the present and other catalogues have brought to light.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1888 *APRIL* 15–21.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on April 15

Sun rises, 5h. 5m.; souths, 11h. 59m. 53·6s.; sets, 18h. 55m.: right asc. on meridian, 1h. 36·2m.; decl. 10° 1′ N. Sidereal Time at Sunset, 8h. 32m.

Moon (at First Quarter April 19, 12h.) rises, 7h. 23m.; souths, 15h. 9m.; sets, 23h. 4m.: right asc. on meridian, 4h. 46·0m.; decl. 18° 18′ N.

Planet.	Rises. h. m.	Souths. h. m.	Sets. h. m.	Right asc. and declination on meridian. h. m.	 °
Mercury..	4 41	10 38	16 35	0 13·8	1 21 S.
Venus.....	4 34	10 36	16 38	0 12·6	0 20 S.
Mars......	18 6	23 39	5 12*	13 16·9	5 55 S.
Jupiter....	22 26*	2 40	6 54	16 15·1	20 14 S.
Saturn....	10 33	18 31	2 29*	8 8·5	20 46 N.
Uranus...	17 40	23 17	4 54*	12 55·3	5 10 S.
Neptune..	6 28	14 10	21 52	3 46·6	18 15 N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

Occultations of Stars by the Moon (visible at Greenwich).

April.	Star.	Mag.	Disap. h. m.	Reap. h. m.	Corresponding angles from vertex to right for inverted image. ° °
16	χ^2 Orionis	6	21 27	22 26	139 300
19	*θ* Cancri	6	19 34	20 45	70 308

April.	h.	
19	13	Saturn in conjunction with and 1° 5′ north of the Moon.

Variable Stars.

Star.	R.A. h. m.	Decl. ° ′		h. m.	
U Cephei	0 52·4	81 16 N.	Apr. 17,	3 41	*m*
Algol	3 0·9	40 31 N.	,, 18,	21 4	*m*
R Canis Majoris	7 14·5	16 12 S.	,, 20,	22 14	*m*
δ Libræ	14 55·0	8 4 S.	,, 17,	22 30	*m*
U Coronæ	15 13·6	32 3 N.	,, 17,	3 31	*m*
U Ophiuchi	17 10·9	1 20 N.	,, 16,	3 44	*m*
			and at intervals of	20 8	
X Sagittarii	17 40·5	27 47 S.	Apr. 15,	4 0	*M*
Z Sagittarii	18 14·8	18 55 S.	,, 15,	0 0	*m*
β Lyræ	18 46·0	33 14 N.	,, 18,	22 0	m_2
R Lyræ	18 51·9	43 48 N.	,, 17,		*M*
S Vulpeculæ	19 43·8	27 1 N.	,, 20,		*M*
R Sagittæ	20 9·0	16 23 N.	,, 18,		*m*
T Cephei	21 8·1	68 2 N.	,, 16,		*M*
δ Cephei	22 25·0	57 51 N.	,, 19,	3 0	*M*
R Aquarii	23 38·0	15 54 S.	,, 17,		*M*

M signifies maximum; *m* minimum; m_2 secondary minimum.